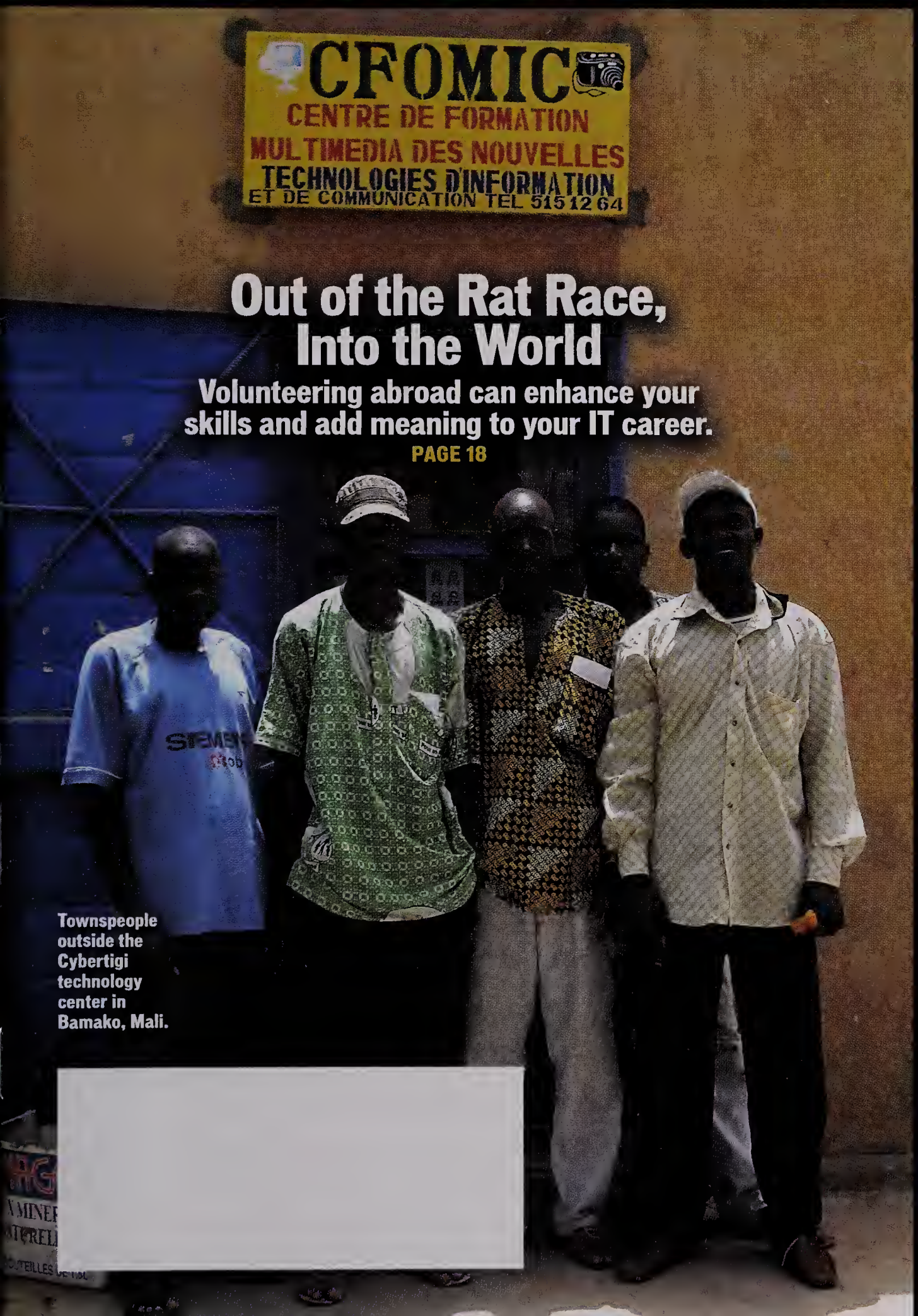
CIO PITFALLS 2.0: Watch out! Here are five state-of-the-art stumbling blocks your predecessors never dreamed of. PAGE 24

COMPUTERWORLD®

Out of the Rat Race, Into the World

Volunteering abroad can enhance your skills and add meaning to your IT career.
PAGE 18



Townspeople outside the Cybertigi technology center in Bamako, Mali.

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DECEMBER 22, 2008
VOL. 42, NO. 50 $5/COPY

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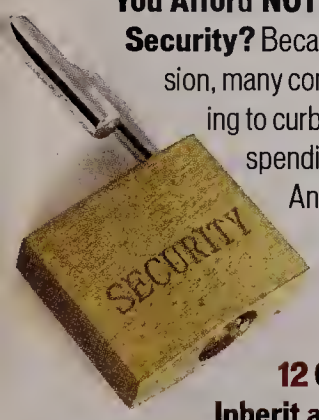

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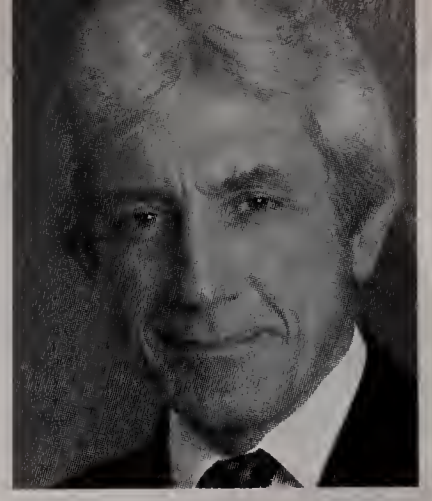
EDITOR'S NOTE

Don Tennant

Destructive Labels



AFTER I INTERVIEWED Earl Pace for a Q&A that was posted on our Web site last week, I knew some pieces of it would end up on the cutting-room floor. I'd had an hourlong conversation with the African-American IT pioneer and co-founder of Black Data Processing Associates, and clearly not all of it would see the light of day.

An anecdote that didn't make the cut had to do with a book Pace said he was reading: *The Black White Divide in America — Still*. The book was written by Ralph Gordon, a former president of the Philadelphia chapter of the BDPA, and Marlin Foxworth, a white superintendent of schools who is an advocate for a program to improve the educational performance of African-Americans and other disadvantaged youth in his California school district.

"In the book, [Foxworth] talks about how, after one of the school board meetings, another white educator walked up to him and in essence said, 'What are you doing? Are you trying to become one of them?' " Pace recounted. "That kind of pressure can keep in check even a person who wants to advocate for movement. Their peer pressure would in essence be saying, 'What are you trying to do? There are some white folks who should get that increase or position. Why are you doing what you're doing?' "

The reason I'm mentioning that anecdote here is to set the context for what Pace said next.

"I don't want to come across as a whiner," he said. "It is a recognition of these obstacles that has driven BDPA, and in particular Earl Pace, these past 33 or 34 years, not just an 'Oh, woe is me' kind of position. You've got to realize what you have to overcome in order to attack it."

Indeed, no one wants to be perceived as a whiner. What's troubling is that too many African-Americans are concerned about that perception, and it's thwarting the discussion we so desperately need to have.

The white IT-worker voice we hear tends to dismiss the race issue. The black IT-worker voice is almost inaudible.

At this writing, 17 reader comments have been posted in response to the Q&A, but only two appear to have been made by African-Americans. In fact, I have written quite a bit about this topic and have received quite a few e-mails and online comments in response, yet those responses only rarely come from those who identify themselves as African-American. My sense is that there's a reluctance to discuss the race issue because of that nagging concern about being labeled as a self-pitying complainer.

I'm not sitting in judgment of that reluctance, because I can't say with certainty what I would do in that position. I'm not certain how I would respond if I were black and I read the comments from readers telling Pace to "get over it" or scoffing that people like him "look under every rock to find even the hint of racism to justify their existence."

But I am certain that the lack of a meaningful dialogue about racism in the IT workplace is unhealthy. As it stands, the white IT-worker voice we hear tends to dismiss the issue altogether. The black IT-worker voice is almost inaudible.

I'm reminded of the article that appeared in the Dec. 1 issue of *Newsweek* titled "What Michelle Means to Us." The African-American author, Allison Samuels, wrote about how Michelle Obama "will have the chance to knock down ugly stereotypes about black women," including that of the "angry black woman."

"Like many African-American women I know," Samuels wrote, "Michelle has had a lot of practice at the delicate tap dance of getting along in the mainstream white world." While professional women "walk the line between being confident and seeming like a bitch," Samuels added, "African-American women are especially wary that being called 'strong' is just another word for 'angry.' "

The labeling crosses genders, and it lies at the heart of a problem that too many of us deny. It needs to end so the discussion can begin. ■

Don Tennant *is* Computerworld*'s senior editor-at-large. You can contact him at don_tennant@computerworld.com and visit his blog at* http://blogs.computerworld.com/tennant.

RESPONSES TO:

Microsoft, Vista And the Big Three

Dec. 15, 2008

In general I don't disagree too much with the column, but having Steven J. Vaughan-Nichols declare the death of Microsoft is like having Sean Hannity declare the death of liberalism. SJVN has been writing vitriol-filled, anti-Microsoft rants for years, and all his column proves is that he badly wants what he writes to be reality.

Me, I'm on the fence, neither for nor against Microsoft. I don't assume they will win but don't count them out either.

Computerworld, why not get someone objective to write about Microsoft's future?

Submitted by: *Mike Schinkel*

Comparing Apple with Toyota is ridiculous. Apple is more like a premium German automaker and has no chance of reaching the market share of Windows. With the combination of low cost and choice of hardware and applications, Microsoft has more in common with Toyota. It's the old commercial UNIX deployments that were like the U.S. car makers. They were largely replaced with Windows.

Submitted by: *Bilal*

RESPONSE TO:

Empowering Resources

Dec. 15, 2008

Don Tennant is absolutely right that workers are valuable resources. The problem is that too many managers and corporations don't know the difference between the words "resources" and "tools." If you look at employees as just a group of tools to be used and disposed of, then you are not thinking of them as resources. And if you truly think of them as resources, then you will not dispose of them lightly.

Submitted by: *Dave*

JOIN THE CHATTER! *You, too, can comment directly on our stories, at* **computerworld.com.**

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Mobile CPU Buyer's Guide

Buying a new laptop? Not sure which processor to get? Our comprehensive guide to the current crop of mobile CPUs can help.

Firefox 3.1 Beta 2 Adds Speed and Privacy

REVIEW: This version of Firefox includes private browsing and a speedier JavaScript engine – two features that indicate Mozilla is on the right track.

10 Ways to Make The iPhone a Killer Business Device

OPINION: Because of the iPhone's roots as a consumer device, enterprises still face a number of challenges if they want to use it for business purposes, says Ryan Faas. He lists 10 things Apple could do to make the iPhone a killer business tool.

12 Fabulous, Freaky and Functional iPhone Cases

Need a last-minute holiday gift? How about an unusual protector for your loved one's most valued gadget? Check out these fun and intriguing iPhone cases.

Speck's ToughSkin ▶ rugged rubber case for the iPhone 3G

Which OS Is Best for Solid-State Drives?

Believe it or not, Windows 2000 is the speed demon over Linux, Mac OS X and other member of the Windows family when it comes to using NAND flash memory.

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News Digest

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THE YEAR AHEAD

In October, McKinsey & Co. asked CIOs and other senior executives how they expect their IT budgets to change in 2009.

OPERATING EXPENSES	
Increase	23%
No change	21%
Decrease	43%
Don't know	13%

NEW INVESTMENTS	
Increase	41%
No change	17%
Decrease	26%
Don't know	16%

Base: 548 respondents worldwide

For more forward-looking coverage of IT issues, read the Forecast 2009 special report in our Jan. 1 issue.

GOVERNMENT

Outsourcing Firms Warn of Possible H-1B Visa Cutbacks

SEVERAL COMPANIES have alerted investors that a changing U.S. political environment could limit access to H-1B and L-1 visas, which they say could hurt their businesses.

In filings with the U.S. Securities and Exchange Commission, offshore and U.S.-based outsourcing firms said they are unsure how the election of Barack Obama and the seating of a new Congress will affect their efforts to maintain adequate visa levels.

Bangalore, India-based Wipro Ltd., one of the largest users of H-1B visas, warned in documents filed shortly after the November elections that "increasing political and media attention" directed at outsourcing may lead to legislation that restricts visa use or "imposes disincentives" to expanding the use of foreign workers in the U.S.

During the presidential campaign, Obama repeatedly promised to "stop giving tax breaks to companies that ship jobs overseas" and to provide incentives to help companies keep jobs in the U.S. Since his election, Obama has not unveiled a detailed plan for H-1B and L-1 visas.

But Obama has nominated for cabinet posts in his administration supporters of increasing H-1B visa caps, including Arizona Gov. Janet Napolitano. In addition, members of his transition team, such as Google Inc. CEO Eric Schmidt, have long been vocal about the need to boost the H-1B cap from its current level of 85,000.

In an October SEC filing, Infosys Technologies Ltd., also in Bangalore, said that almost 7,000 of its employees held H-1B visas at the end of September. Infosys said that 1,500 other workers held L-1 visas, which are used by multinational firms to transfer employees based offshore to the U.S. A year earlier, 7,700 Infosys workers had either L-1 or H-1B visas, the company said.

In its filing, Infosys warned that its "reliance on work visas for a significant number of technology professionals makes us particularly vulnerable" to changes.

In an October SEC filing, Pittsburgh-based IT services provider Mastech Holdings Inc. said that unless Congress "substantially increases the annual H-1B quota," its pool of workers could be reduced. About 40% of Mastech's U.S. workforce have H-1B visas.

— Patrick Thibodeau

IT INDUSTRY

Jobs Won't Do Usual Keynote At Macworld

In a move likely to spark renewed questions about the health of Apple Inc. CEO Steve Jobs, the company said last week that the keynote speech at next month's Macworld Conference & Expo will be delivered by a marketing executive instead of Jobs.

Apple also said it won't exhibit at or send speakers to Macworld after the 2009 show. Jobs has used previous Macworlds to unveil key products, such as the iPhone and the MacBook Air.

Apple CEO Steve Jobs during his Macworld keynote last January.

Jobs, who had a cancerous tumor removed from his pancreas in 2004, looked gaunt at Apple's Worldwide Developers Conference in June, fueling talk that he might again be ill.

But he "looked fine" at a MacBook announcement in October, said Ezra Gottheil, an analyst at Technology Business Research Inc. By switching Macworld speakers, Apple may just "want to communicate that the company is a good deal more than Jobs," Gottheil said.

– GREGG KEIZER

ILLUSTRATION: © FOTOLIA / MRPLISKIN; PHOTO: MATTHEW YOHE

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ENTERPRISE APPS

Select Comfort Puts SAP Project Into Sleep Mode

BED MAKER Select Comfort Corp. last week announced that it is halting work on an implementation of SAP AG's ERP applications as part of a cost-cutting effort. But shareholder pressure also may have contributed to the project shutdown.

Select Comfort, which lost $12.7 million in the first three quarters of the year, said that ending the SAP project will help it save about $15 million annually. The Minneapolis-based company also said that it plans to lay off 120 employees, or 22% of its workforce.

A spokeswoman declined to comment further about the stopping of the ERP work, and it was unclear whether any of the layoffs are related to that decision. In its announcement, Select Comfort said only that the jobs being cut will include administrative and customer service positions.

Select Comfort has been a user of Oracle Corp.'s ERP software since 1998. But the company said in a 2007 filing to the U.S. Securities and Exchange Commission that it planned to install a suite of SAP's applications, including the vendor's ERP, CRM and supply chain management modules. The rollout was initially expected to be completed during the first half of this year.

The project was delayed, though, and other SEC filings show that Select Comfort officials had been pressured to spike it by an institutional shareholder, New York-based investment firm Clinton Group Inc.

"Given Select Comfort's financial performance, the implementation should cease immediately," Jerry Levin, vice chairman of Clinton Group, wrote in a June 23 letter to Select Comfort's board.

An SAP spokeswoman described Select Comfort's decision as an anomaly. "We fully recognize these are truly critical times for our customers," she said. "[But] SAP projects are continuing to go forward."

— Chris Kanaracus, IDG News Service

Short Takes

A federal judge rejected SAP AG's motion to dismiss breach-of-contract and unjust-enrichment charges from rival Oracle Corp.'s lawsuit against it. Oracle contends that SAP officials knew that workers from its former TomorrowNow unit were illegally downloading data from Oracle support systems.

Mozilla Corp. has issued eight patches for its Firefox Web browser, three of which are rated "critical." The release includes the final update for two-year-old Firefox 2.

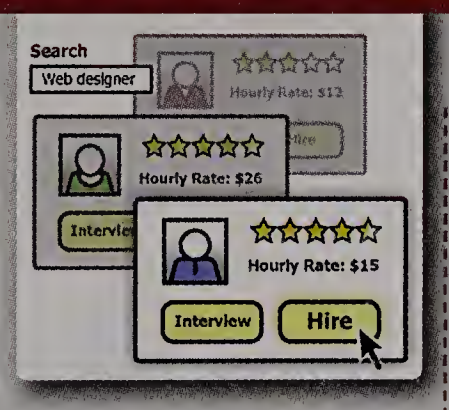
Motorola Inc. announced that co-CEOs Greg Brown and Sanjay Jha voluntarily agreed to cut their $1.2 million base salaries by 25% and that it will suspend matching contributions to employees' 401(k) accounts to reduce costs.

Apple Inc. has released a major set of security patches for its Mac OS X operating system, fixing a number of "critical" flaws. The update fixes bugs in several Mac OS X libraries, the OS X system kernel and system utilities.

WORKFORCE

Job Seekers Flood IT Staffing Site

About 20,000 people looking for jobs signed on to oDesk Corp.'s online staffing marketplace in November, the largest monthly increase – by at least 40% – that CEO Gary Swart has seen since joining the firm in 2005. Swart said he expects another 15,000 people to sign up this month.



About 4,600 contract jobs are listed on the oDesk site, about twice the number available a year ago. The growth in available jobs is a sign that contract work, like outsourcing, is countercyclical – it tends to expand when the economy is troubled.

"Companies are trying to do more with less," Swart said.

In all, some 157,000 people are currently seeking work on the site.

Meanwhile, the National Association of Computer Consultant Businesses reported earlier this month that overall IT employment in the U.S. declined by almost 34,000 jobs between October and November. U.S. IT employment for the month stood at about 3.87 million.

Robert Scheier, a managing director for sourcing advisory services at Pricewaterhouse-Coopers International Ltd., said that the use of contractors is growing as companies look to cut IT costs.

Workers listed on the oDesk site are located around the world, and the hourly rates offered reflect the economic differences among countries – averaging $12.52 in India, $6.33 in the Philippines, $16.86 in Russia, and $18.32 in the U.S.

– PATRICK THIBODEAU

SECURITY

Microsoft Issues Emergency IE Patch

MICROSOFT CORP. last week issued an emergency patch to plug a critical hole in Internet Explorer that attackers have been increasingly exploiting from hacked Web sites.

The update was the second emergency patch issued by Microsoft in the past three months.

The latest patch fixes a flaw in the data-binding function in all versions of the company's popular browser. Microsoft labeled the bug "critical," the most serious ranking in its four-level threat-scoring system.

Andrew Storms, director of security operations at nCircle Network Security Inc., said Microsoft executed the emergency release well. "This was a classic case of what we would like to happen," Storms said. "Microsoft acknowledged the fault, issued work-arounds, gave us advance notice that it would patch and then released the patch."

Microsoft first acknowledged the vulnerability on Dec. 10, a day after it unleashed its biggest set of scheduled security updates in more than five years.

According to Microsoft and several security firms, attacks on IE increased quickly after the disclosure, as hackers hijacked legitimate Web sites and launched exploits against unwary visitors. Microsoft said it observed a "huge increase" in attacks on Dec. 13.

Wolfgang Kandek, chief technology officer at Qualys Inc., suggested that users apply the patch immediately. Corporate users "should be able to roll it out with your normal patch process," said Kandek. "Fixes for Word, PowerPoint and especially IE, you should be able to [deploy] quickly without much testing."

The patch is available for users of Windows 2000, XP, Vista, Server 2003 and Server 2008 and can be downloaded and installed via the Microsoft Update and Windows Update services, as well as through Windows Server Update Services.

— Gregg Keizer

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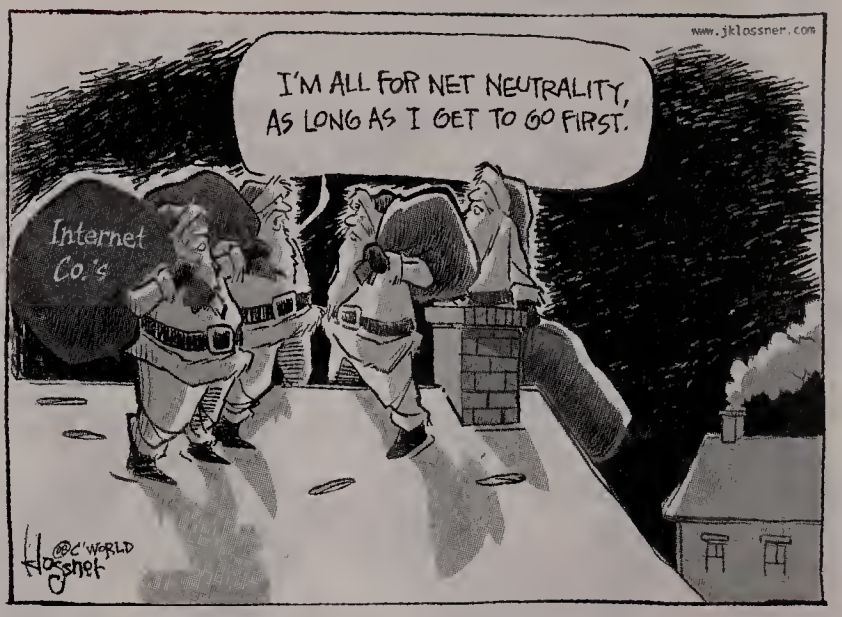
BETWEEN THE LINES *By John Klossner*



BENCHMARKS LAST WEEK

Novell Inc. canceled its BrainShare 2009 conference, scheduled for March in Salt Lake City. The company said many users were "hesitant" about attending because of the recession.

The **U.S. Securities and Exchange Commission** approved a plan requiring public companies to file interactive financial reports based on the Extensible Business Reporting Language.

21 YEARS AGO Programmer Larry Wall released Perl, which has since been described as "the Swiss Army chain saw of programming languages."

Global Dispatches

Siemens Admits to Bribery Charges

MUNICH – Siemens AG and subsidiaries in Argentina, Venezuela and India last week pleaded guilty to violating the U.S. Foreign Corrupt Practices Act by, among other things, attempting to bribe government officials around the world.

The electronics firm, which is based here, and its units agreed to pay $450 million in fines, according to the U.S. Department of Justice and the U.S. Securities and Exchange Commission.

U.S. authorities charged that Siemens falsified its records and neglected to implement internal controls starting in the mid-1990s. Linda Chatman Thomsen, director of the SEC's Division of Enforcement, called the actions "unprecedented in scale and geographic reach."

Siemens officials were unavailable for comment.

Grant Gross,
IDG News Service

Court OKs Help in Antitrust Appeal

BRUSSELS – The European Court of First Instance agreed to let trade groups and competitors intervene in Microsoft Corp.'s appeal of the €1.1 billion ($1.6 billion U.S.) fine that the European Commission imposed on the company.

The EC fined Microsoft €497 million in 2004 for antitrust violations and then added €600 million more in penalties after the vendor failed to honor the initial order for three years.

With the court's decision, trade groups such as the Association for Competitive Technology and the Computing Technology Industry Association will likely get involved in the case on behalf of Microsoft, while IBM, Oracle Corp. and Red Hat Inc. will support the EC's position.

Paul Meller,
IDG News Service

BRIEFLY NOTED

HCL Technologies Ltd. has completed a £441 million ($677 million U.S.) acquisition of Axon Group PLC, an Egham, England-based SAP consulting company. HCL CEO Vineet Nayar wouldn't say how the deal will affect the financial performance of the Nodia, India-based outsourcer.

John Ribeiro,
IDG News Service

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Priority Check:

What Can You Afford NOT to Do On IT Security?

There may be some security projects you can put off because of the recession — without risking your company's data or reputation.

By Jaikumar Vijayan

© FOTOLIA / SNOOT / TASSSD

WITH THE ailing economy putting a crimp in IT budgets, information security managers — like just about everyone else in the tech world — are feeling pressure to keep their costs in line.

Few expect to be hit with outright budget reductions, at least in the short term; regulatory requirements and the ever-expanding list of external and internal threats make it hard to devote less money to security efforts. But there is a growing push to curb or defer spending increases, according to IT managers and security analysts.

"It's imperative to squeeze every penny of value out of everything you do," said Jim Kirby, senior network engineer at DataWare Services, an IT services firm in Sioux Falls, S.D. This is a good time to stop working on "marginal" projects and redirect resources to security capabilities that are absolutely necessary, Kirby said.

Matt Kesner, chief technology officer at Fenwick & West LLP in San Francisco, said the law firm's security strategy for next year is to "focus on basics." Its 2009 IT budget doesn't call for reduced spending on security — but neither does it include a funding increase.

And Fenwick & West is taking some steps to cut costs. The firm is deferring an earlier plan to hire a full-time networking and security expert because of the recession, Kesner said. It is also looking for opportunities to use open-source alternatives to some of its security tools.

One of the few new IT projects approved for next year is a replacement of the antivirus software installed on all of the law firm's PCs — an upgrade that Kesner said is being driven by the increased threats to corporate data from malware and phishing attacks. Fenwick & West also plans to train end users more intensively on how to secure their PCs and mobile devices, and on the importance of creating strong passwords.

Even in an economy gone sour, a growing number of government and industry regulations impose security compliance costs that there is simply no getting away from. For instance, new data-protection laws in states such as Massachusetts, Connecticut and Nevada require companies to use data encryption tools and implement other security controls to safeguard the personal information of state residents.

Fenwick & West CTO Matt Kesner said the law firm's security strategy for next year is to 'focus on basics.' It's also taking some steps to cut costs.

Similarly, the Payment Card Industry Data Security Standard, created by the major credit card companies, requires all businesses that accept credit and debit transactions to adopt a broad set of data protection controls. And the federal HIPAA law includes data security and privacy rules for health care providers in order to protect patient information.

Meanwhile, cybercrooks are targeting companies with increasingly sophisticated — and successful — attacks. For example, Symantec Corp. said in a report last month that at least $1.7 billion worth

Continued on page 10

GIANT LEAPS. SMALL FOOTPRINTS.

With the world's data growing dramatically, IBM storage virtualization solutions can help you gain control in a responsible, energy-efficient way. The IBM System Storage™ SAN Volume Controller can reduce storage growth by up to 20% and boost utilization by as much as 30%. And combined with IBM tape solutions, some companies have reduced their TCO by as much as 50%. A greener world starts with greener business. Greener business starts with IBM.

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Continued from page 8
of bank accounts were compromised in the U.S. during the 12-month period that started in July 2007.

In light of all that, not making cutbacks in antivirus subscriptions and purchases of frontline security tools such as firewalls and network intrusion-detection systems is a no-brainer, security managers said.

Kirby said investments in outbound-traffic inspection tools and controls for locking down portable media devices also are worthwhile because of the heightened risk of insider attacks at a time of increased layoffs. In addition, he thinks that cutting back on disaster recovery and business continuity projects wouldn't be wise.

Whittling away at risk management and compliance oversight functions is another bad idea, said the chief privacy officer (CPO) at a large financial services firm. That could leave companies facing potentially serious consequences for not complying with security requirements, he said.

WHAT TO CUT

But there are other areas in which IT and security managers may be able ease up on spending. Kirby said that although intrusion-detection systems are a must-have item, many companies can live without intrusion-prevention tools, which are more sophisticated but also more expensive and harder to manage. He added that biometric security projects can often be postponed.

Paring back on third-party security education and training programs can also yield some extra dollars that can be used for other purposes, said the CPO, who asked not to be identified. "Companies have a lot of vendor-hosted or vendor-provided education programs — kind of, 'Here's how you do data security if you're covered by HIPAA or by PCI,' " he said. According to the CPO, the cost of individual programs can sometimes top $200,000 annually, depending on the number of employees being trained.

Marcin Czabanski, director of IT at LifeSecure Insurance Co. in Brighton, Mich., said companies should also look for ways to move applications — and their security functions — into the computing clouds offered by vendors such as Google, Microsoft and Amazon.com.

By doing so, Czabanski said, "you can outsource a lot of the headache" of managing and securing desktop applications — and do so for less money than keeping the work in-house.

E-mail is another application that can move to the cloud. The Henssler Financial Group in Kennesaw, Ga., is a user of Google's Postini e-mail security and archiving services. Tim O'Pry, Henssler's chief technology officer, said the arrangement has enabled the financial services firm to offload to Google the hassle and expense of securing its e-mail system.

In addition, using the hosted services has "dramatically" reduced Henssler's e-mail archiving costs while making it easier for employees to search for and retrieve old messages, O'Pry said.

Moving e-mail to a cloud infrastructure such as Google's can also help organizations lower the costs of complying with e-discovery rules in legal cases, said David Jordan, chief information security officer for Virginia's Arlington County.

For instance, Google earlier this year launched a Postini service called Message Discovery that is designed to help businesses comply with e-mail retention regulations and speed up the process of retrieving messages in response to lawsuits or other legal matters. Such setups can also help customers trim their e-mail hardware, software, management and security costs, Jordan said.

Another possible cost-saving option, he noted, is deploying virtualization and thin-client technologies that let employees access a set of centralized applications. Jordan said he thinks that thin-client architectures are inherently more secure — and thus less costly to manage and control — than traditional client/server computing models.

Any cutbacks should be carefully weighed, though.

Phil Hochmuth, an analyst at Yankee Group Research Inc., said it's understandable that companies might want to rein in their security spending (see related story, at left). But on a longer-term basis, "it would probably be a mistake if they backed off strategic initiatives" just to cut costs now, Hochmuth said.

O'Pry agreed. "Trying to scrimp and save on security in this economy would be a penny-wise, pound-foolish thing to do," he said. O'Pry noted that as a financial services firm, Henssler is "affected more than anyone else" by the downturn. Even so, there's little talk within the company about cutting security spending. "Your most valuable nontangible asset is your reputation," O'Pry said. "You can't risk taking any hits to that." ■

Analyst: Get More Out of What You Already Have

Yankee Group analyst Phil Hochmuth said efforts to control IT security costs in the current economic environment should be focused on getting more mileage out of the tools that are already in place, not on delaying planned new protections.

That approach could reduce the need for additional spending without leaving companies defenseless against new security threats, according to Hochmuth.

For instance, he said that instead of buying separate intrusion-prevention tools, companies could take advantage of similar functionality offered in products such as network routers and firewall devices.

Security managers should be "thinking about how to eliminate redundancies and pare down the infrastructure" wherever it's possible to do so, Hochmuth said.

As companies tighten their belts because of the recession, he added, it's inevitable that IT security budgets will be geared more toward fighting fires than toward costly technology deployments.

"The intensive projects that require a lot of capital outlay and work on the integration side are probably going to be throttled back," Hochmuth said. He also expects companies to look more closely at integrating their security, networking and operations teams and reducing their staffing levels.

– JAIKUMAR VIJAYAN

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Obama Will Inherit A Real Mess On Real ID

The effort to impose national standards for photo IDs remains a bone of contention between federal and state officials.

By Jaikumar Vijayan

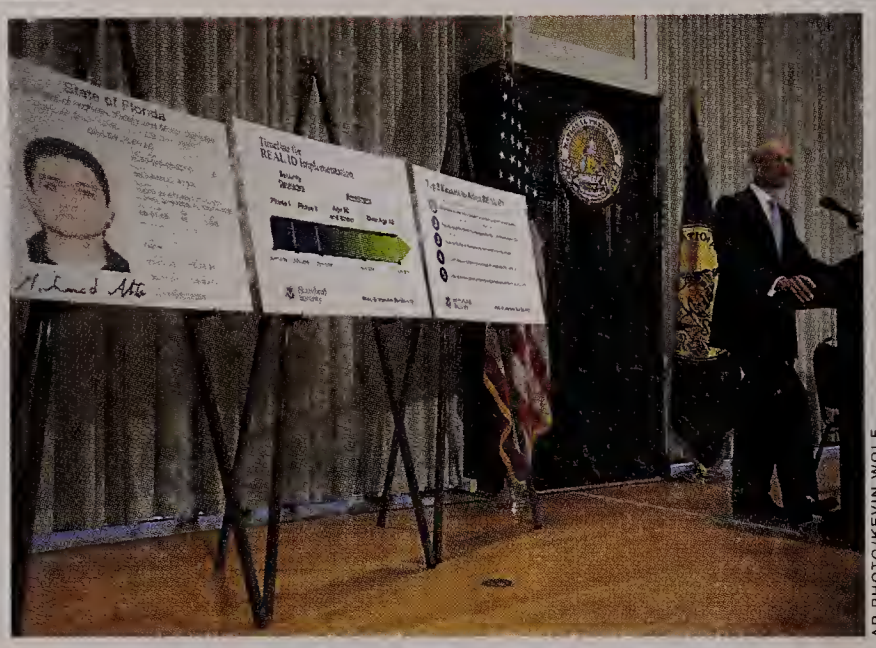
AS PRESIDENT-ELECT Barack Obama prepares to take office, it's unclear how his administration will proceed on the technology-heavy Real ID program. But what is all too clear is that the three-year-old effort to impose identification-card standards on state governments remains mired in controversy.

Obama has made virtually no public comments about the initiative, which calls for driver's licenses and other state-issued IDs to include digital photos and be readable by scanning devices. In addition, the one time that the Senate considered a Real ID funding issue during Obama's tenure there, he didn't cast a vote.

Meanwhile, Arizona Gov. Janet Napolitano, Obama's choice to be secretary of the U.S. Department of Homeland Security, signed a bill in June barring her state from participating in the program. And during a Senate committee hearing last year, she said that complying with the rules would cost state governments a total of $11 billion. The DHS is responsible for implementing the Real ID rules.

"I don't think anybody in the next administration, including Napolitano, wants to deal with Real ID," said Jim Harper, director of information policy studies at the Cato Institute in Washington. "It's a real stinking mess. Most likely, they'll find the quietest way they can to get it off their plates."

The Real ID Act was signed into law by President Bush in 2005 as part of the government's effort to combat terrorism. Other IT-related provisions require participating states to store digital images of IDs for up to 10 years and link their driver's license databases to one another.



AP PHOTO/KEVIN WOLF

Homeland Security Secretary Michael Chertoff details the agency's final Real ID rules at a press conference in Washington last January.

But the law has been widely criticized by privacy advocates and civil rights groups. Even a DHS advisory committee voiced reservations about Real ID last year, citing privacy, security and logistical concerns.

Real ID has also become a bone of contention between the DHS and state governments that see it as an attempt to force unwanted standards down their throats while making them pay for the program. In addition to Arizona, states that have said they won't participate include Arkansas, Idaho, Maine, Montana, New Hampshire, South Carolina and Washington.

There's no mandate that states issue Real ID cards. But eventually, all citizens will need IDs that comply with the requirements in order to board planes, enter federal buildings and receive federal benefits.

The outpouring of protests has prompted the DHS to ease up on its implementation deadlines. For instance, under the final rules set by the agency last January, existing driver's licenses will continue to be accepted as federal identification until December 2014. And people who are age 50 or above at that time won't have to show Real ID cards for another three years.

Also, after initially setting a deadline of last March for states to request extensions on meeting an initial set of Real ID requirements, the DHS backed off of threats to begin enforcing the rules.

Harper said the agency decided to slow down and pass the baton to the next administration. DHS officials "realized there's just no way they're going to win this" by taking a confrontational approach, he said.

At this point, the only reasonable way forward is for the DHS to work more cooperatively with states on Real ID implementations instead of continuing to "dangle sabers over their heads," said Chris Dixon, an analyst at Input, a government IT consulting firm in Reston, Va.

"This should have been put to bed long ago," Dixon said, noting that many states are already implementing new ID features similar to what Real ID requires, as part of their own efforts to improve security.

If Napolitano is confirmed as head of the DHS, said Dixon, her experience as the governor of a state that is fighting Real ID might help point the way to a resolution. "Napolitano," he said, "could sit down with the governors and try to find a way out of this impasse." ■

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THE GRILL

Ken Bohlen

Textron's **chief innovation officer** talks about overseeing **corporate transformation,** managing the **white space** and taking **'Gemba'** walks.

You may have been the first Fortune 500 executive given the title "chief innovation officer" when you were named to the post by Textron in April 2000. How did the role come about? I was hired here in November 1999 in a traditional CIO role. At that time, there was a ton of work going on in the e-business world. I had a lot of experience in sales and marketing prior to coming into IT.

Over the course of two board meetings, I presented what we needed to be looking at from [the viewpoint of] procurement and engineering with e-business. This is a bigger opportunity than IT; it's about business models. I made that clear to the board and the chairman. And our chairman [Lewis B. Campbell], who has been a very aggressive learner, realized that there was an opportunity for us to create something new and different.

We call it our "journey of transformation." At the time, we had 11 business units, none of which could connect or communicate with each other. So my job initially was to create this infrastructure so you could have this connectivity throughout the Textron environment. A lot of companies had already done it by then. Textron had not. It had inhibited our

Continued on page 16

Dossier

Name: Ken Bohlen

Title: Executive vice president and chief innovation officer

Organization: Textron Inc.

Most interesting thing people don't know about him: "I married the girl next door. I've known her since kindergarten."

Favorite technology: "Fast cars, like the Mercedes-Benz S55."

In high school . . . "I ran a 49-second quarter mile and a 9.9-second 100-yard dash."

Favorite nonwork pastime: "Family – four grandchildren, what a blast! Also, I just took up biking; finished my first 70-mile race."

Favorite vice: Chocolate chip cookies

Pet peeve: "Other people liking chocolate chip cookies!"

Philosophy in a nutshell: "Treat others the way you want to be treated – just a little nicer!"

Book on your nightstand: *Footprints*, by Howard and Jeanne Hendricks

Favorite movie of all time: *Chariots of Fire*

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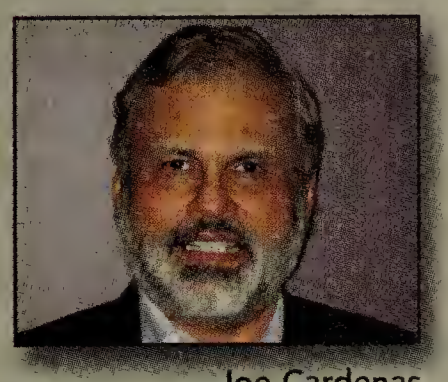

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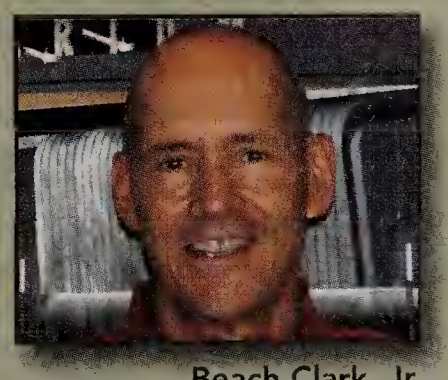

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"When it's all said and done, the whole game is still about people.

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ability to communicate as a company.

We also consolidated over 180 data centers to two. And we standardized on a single laptop. We did a billion-dollar outsourcing deal with CSC to give us the security we needed and a common thread of IT applications like payroll, finance and insurance.

The biggest thing that came out of it was the development of a Web site to show the whereabouts of our executives and [provide] information on demand, essentially. That got us to look into other things, like online auctions for commodity materials and online maintenance procurement for our jet aircraft. This allowed us to grow into other areas as we got into far-reaching opportunities.

On the engineering front, we very rapidly began developing consistent methods around how we wanted to design and develop products.

What are some recent examples of innovation at Textron? If we think about product innovation, we're putting together a new piston aircraft called the SkyCatcher. It was developed in a traditional skunk works style. The chairman at Cessna [Jack Pelton] said he didn't want anyone to know about it. It was an innovative process that wrapped in a new product.

But what I found intriguing was that it brought in such an innovative process that we had [Harvard Business School professor] Clay Christensen come in and talk to us about it. The concept is that you have to be innovative on the back end. If you don't manage that, some upstart can outgrow you from the bottom up. So we decided that we needed a new business model for this.

How did your background as an IT leader help prepare you for the chief innovation officer role? IT is one of the few areas where you have to manage between the department silos. The IT person is one of the few who understands managing the white space.

What are the biggest challenges you face in your role? When it's all said and done, the whole game is still about people. Some of the biggest challenges are being able to create a vision that people can look toward with a spirit of expectation. When we got to thinking about how to change the holding company to an operating company, the CEO and I said that all of the [business unit] CIOs would be hard-lined back into my office rather than into each of the business offices.

Those are some of the frustrations we'd run into: "Don't mess in my sandbox." But as we developed a proven track record, people saw that this wasn't about changing reporting structures; it was about creating the right path for the businesses.

You also oversee Textron's Global Technology Center in India. How difficult is it to find qualified IT professionals and engineers in India? We're having tremendous success at finding highly qualified people in all of our industry groups. In the Bangalore area, there are a lot of IT professionals as well as a lot of very good colleges.

We also are blessed with a very low turnover rate. The average turnover rate for engineers in India is 14% to 18%. Ours is 7% to 8%.

What other markets do you draw from for these types of skills? We've focused on Bangalore as our engineering center for Asia. We have international purchasing and sourcing offices in China, India, Poland and Mexico.

In addition to overseeing engineering and information systems for Textron, you're also responsible for the company's integrated supply chain and its Lean Transformation and Six Sigma efforts. How do you balance your time? I have no life. I have an office in Texas, in Detroit, in Providence — and I live in Phoenix. In every one of my remote offices, I have a change of dress, because I don't know from one day to the next where I'll be.

I like to go on these Gemba walks [a lean manufacturing concept: walking along the shop floor where the work is done]. It's so much more effective if I go see something that's happening on the shop floor than to have it described to me. It takes a lot of energy, but it's one of the most satisfying aspects of the job.

A growing number of CIOs have taken on additional responsibilities outside of IT, such as supply chain and logistics. Are there certain business disciplines you think CIOs are well suited to oversee? Most times, the reality is, it's dependent on the person and not so much on the job. So I think that for some of those people who had a spirit of learning as they were going through the IT arena, they're capable of managing multiple functions.

You're also a member of IBM's advisory board. What's that like? The advisory board is really a neat process. They throw out ideas about what they're thinking about doing. This is not a customer group. It's really, "OK, guys, give us your thoughts. Here's what we're thinking about." Nick [Donofrio, IBM's executive vice president of innovation and technology] has been open to share his innovation processes with the advisory board. We meet three times a year by phone and three times a year in person.

My involvement is holding us to the truth of an advisory board: Don't ask me to buy anything, but ask my opinion about something, and I'll tell you about the pluses and minuses of it.

— *Interview by former* Computerworld *national correspondent* **Thomas Hoffman.** *He can be reached at tom.hoffman24@gmail.com.*

OPINION

Paul M. Ingevaldson

Top 10 Qualities of A Great IT Shop

NO TWO IT shops conduct business in the same way: CIOs report to various executives, project approval processes are all over the board, and personnel policies are vastly different. Unlike other professions, IT doesn't seem to have a common set of basic principles across companies.

But some best practices have bubbled to the top. If I were anticipating a move to a new company or evaluating an IT shop as a consultant, here are the most important practices I'd be looking for:

1. The CIO reports to the CEO or, at least, the chief operating officer. This is vital to the success of the IT department. It gives the CIO clout and ensures IT's independence.

2. There is an IT steering committee composed of C-level executives from the business units. The executives make their decisions based on some set of priorities and criteria such as ROI. The committee is necessary to ensure that allocation decisions are made in the interests of the entire company, not of an individual department.

3. The IT shop uses up-to-date software and hardware. It should also have reasonable policies for PC software upgrades and other regular system updates. In addition, the company should be spending an appropriate percentage of corporate revenue on IT. This indicates the company's level of commitment to IT.

4. There is a high-visibility system security team. Since security is one of the most vulnerable areas of IT, it must be well managed.

5. There is an ongoing disaster recovery process involving users, and a documented recovery plan that is tested regularly.

There are some important practices I'd be looking for if I were moving to a new company or evaluating an IT shop as a consultant.

Commitment to security and disaster recovery indicates the importance of IT to senior management.

6. There is an ongoing commitment to training to keep IT staffers up to date. This should include attendance at technology conventions as well as training seminars and industry events. If there is a lack of training and a parallel use of consultants, you know that the focus is not on in-house staff.

7. There is rigid adherence to some system development life cycle (SDLC) that is understood by IT and the user community alike. (Knowing how IT works helps users interact with IT more effectively.) Any of several SDLC plans may be used, depending on the type of project, but the process of selecting the approach should be documented. This gives you some insight into the professionalism of the IT organization.

8. There are established technical and managerial career paths that enable workers to remain technical and achieve higher pay and status within the organization. This is the only way to retain top technical people who have no interest in managing others.

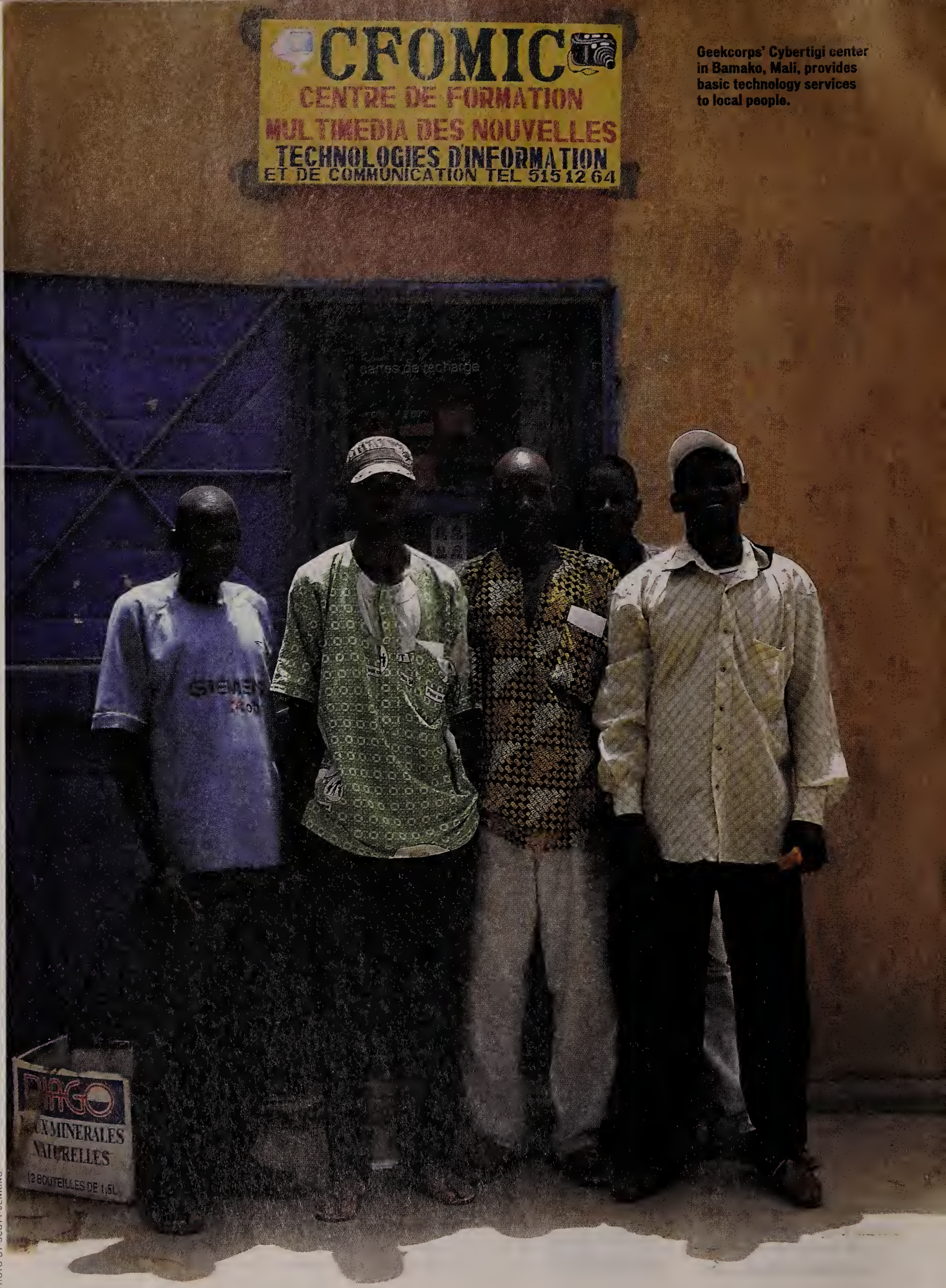
9. IT produces, at minimum, a monthly status report that shows progress on all major IT projects. This document should be widely distributed throughout the company. Its existence shows the level of interest of IT within the organization.

10. IT sits at the long-range planning table and participates. If this is lacking, it is a sure sign that IT is looked at as an implementer and not an enabler.

These are the things I would look for in a top IT shop. I have seen many shops that follow some of these practices, but few that follow all of them.

If you agree or disagree or would like to suggest other practices, please let me know. Perhaps with such a dialogue, our industry could at last agree on some basic principles that would be common across the majority of IT shops. Such consistency would be a big step forward in the growth of IT professionalism. ■

Paul M. Ingevaldson *retired as CIO at Ace Hardware Corp. in 2004 after 40 years in the IT business. Contact him at ingepi@aol.com.*



Geekcorps' Cybertigi center in Bamako, Mali, provides basic technology services to local people.

PHOTO BY SCOTT JENKINS

Leaving THE Rat Race TO Save THE World

How to enhance your high-tech career with new skills — and meaning.

By Cindy Waxer

RYAN WHITNEY had been back in the U.S. less than two months when he received an urgent call from Geekcorps.

The nonprofit service agency wanted him to travel to Cape Town to help a consortium of African universities develop and promote open-source software. Although Whitney had just spent nine months backpacking through Central America, he leapt at the chance to return to foreign soil.

Whitney isn't some rudderless techie with time to kill. Before hitting the road, he had been earning six figures as an independent IT contractor, but he couldn't shake the feeling that something was missing in his career.

"Over the last couple of years, I realized that technology wasn't the problem; I just had the wrong job," Whitney says. He called it quits in the summer of 2007 and enlisted with Geekcorps. "Geekcorps was an opportunity to do some good with my skills," he explains.

Whitney is just one of a growing number of seasoned IT professionals trading in annual bonuses and executive perks to volunteer their time and expertise in developing countries. In fact, phone calls and e-mails from techies interested in registering with Geekcorps have increased 30% over the past year, says Karen Muir. "We have more geeks now than we have projects," she admits.

Muir is senior director of program development at Geekcorps' parent organization, the International Executive Service Corps. Geekcorps itself is a nonprofit that sends highly skilled IT professionals to developing countries to assist in computer infrastructure development projects.

It's one of a number of nonprofits such as NetHope, Engineers Without Borders and ACDI/VOCA that send teams of techies around the world for two to 12 months to offer technology training and resources — for free.

CORPORATE COOPERATION

But nonprofit organizations aren't the only facilitators of volunteer activity. Although the turn-of-the-millennium's dot-com bust drove yesterday's techies into the arms of nonprofits, and today's economy may have the same effect, healthy companies have also been supporting volunteerism.

"Companies now have a renewed sense of giving employees the flexibility to do volunteer work," says Muir. For example, earlier this year, IBM launched a program called Corporate Service Corps to send 100 employees to Romania, Turkey, Vietnam, the Philippines, Ghana and Tanzania to work on projects that combine economic development and IT. And the response was impressive: More than 5,000 employees applied to participate.

Such programs mark a significant shift in the way some companies view volunteerism, and they're not only facilitating humanitarian efforts, but also helping IT professionals discover a previously untapped job market.

Just ask Steve Ollis, a former IT project manager and consultant. His overseas volunteer experience includes analyzing the financial systems of a farmers savings and credit cooperative in rural Kenya for ACDI/VOCA and helping the consortium of African universities that Whitney assisted through Geekcorps.

"I was looking for an adventure," says Ollis. "If I was working as hard as I was, I wanted to be working for something that had more meaning than just making money."

Shortly after completing his two-month stint with Geekcorps last year, Ollis landed an IT management position with a nongovernmental organization (NGO) specializing in international health care. Now stationed in Tanzania, he says he never would have qualified for the job without his overseas volunteer experience.

Whitney, too, has been able to parlay his volunteer experience into full-time

A Day IN THE Life

Geekcorps volunteer Scott Jenkins and his wife, Allison, enjoy an egg salad sandwich in Mali.

It's not often that an American IBM employee awakes to the sound of the Islamic call to prayer, is served mint tea by uniformed guards and catches a concert by a West African reggae superstar – all within 24 hours. Yet that's exactly how Scott Jenkins recalls an average day in balmy Bamako, Mali.

Jenkins, an associate partner at IBM Global Business Services, was stationed in the growing capital for two months earlier this year as a Geekcorps recruit. A long way from IBM's tony New York offices, Jenkins lived and worked in Geekcorps Mali's mixed-use, four-story headquarters, where unarmed guards in purple uniforms served techies "a potent mint tea with enough caffeine to just knock you out," laughs Jenkins.

Not that Jenkins was spoiled during his stint in Mali. Living accommodations consisted of a small room with an air conditioner and shared bathroom facilities. And work conditions were plagued by power outages and spotty Internet connections.

Jenkins used his vacation pay from IBM to finance most of the trip; Geekcorps covered his medical, evacuation and travel visa expenses. The nonprofit also paid him a $10 daily stipend to cover his food costs.

Jenkins knew he wasn't in Armonk anymore the moment he landed in Bamako Airport and was immediately accosted by "hundreds of Malians trying to [sell] SIM cards and taxi rides."

He worked 9 to 5 in a 10-person team of Malian and Western IT professionals. And he says it was the people he encountered that defined his experience as a Geekcorps recruit.

Off-hours, when he wasn't picking up a fabulous egg salad sandwich from a roadside food stand, Jenkins says he was frequenting Senagalese restaurants where, by candlelight, he could feast on rice with an "out-of-this-world" peanut sauce for about a dollar.

Nights on the town ranged from visiting the homes of American expats to catching a concert by world-famous recording artist Alpha Blondy.

Jenkins himself was often the center of attention. "I'd be walking down the street, and 90% of the time a child would see me and yell, '*Tubabu*, *tubabu*,' the Bambara word for 'white person,' pointing at me as if I were a zebra walking by," he chuckles.

But Jenkins was embraced by Bamako's friendly inhabitants. "You say hello to everybody you walk by on the street – everybody," he recalls, noting that the locals eagerly invite foreigners into their homes and share what little they have with complete strangers. "The Western world associates crime and violence with poverty," says Jenkins. "But in a city without any street lights, walking in the dark everywhere with people all around me, not once did I ever feel threatened. Everyone is warm and welcoming."

– CINDY WAXER

employment with an NGO. He's now a technical program manager with the Grameen Foundation, where he's building an open-source software system in Tunisia to help microfinance institutions fight global poverty.

INTO THE MAINSTREAM

High-tech positions with a social agenda, such as those available through NGOs, are becoming an increasingly mainstream option for skilled IT professionals.

That certainly holds true for Edward Granger-Happ. Granger-Happ is chief technology officer at the nonprofit organization Save the Children and a co-founder of NetHope, a consortium of 22 international nonprofits focused on communications technology and collaboration.

"Most of us that are working in IT in nonprofit organizations can double our income by going elsewhere," he says. "But there comes a point when the next dollar isn't worth it."

In fact, corporations are facing increasing competition from NGOs in the IT talent market, particularly as a labor shortage looms. In a 2006 study by communications agency Cone LLC, 79% of the 1,800 13-to-25-year-olds surveyed said they wanted to work for a company that cares about how it affects and contributes to society. And 69% of survey respondents with jobs said they were aware of the extent to which their employers were committed to social and environmental causes.

Many large companies have risen to the challenge by rolling out in-house volunteer programs and granting employees' requests to work with organizations such as Geekcorps. Leading IT companies, including Microsoft, Hewlett-Packard and Cisco, have loaned employees to the popular nonprofit.

"Companies are starting to realize that they don't just have a financial responsibility but a social responsibility as well," says Whitney. "There's more to being a corporation than making money."

Of course, corporate intentions aren't entirely altruistic. A growing number of companies now view overseas volunteer work as an experience that can deliver value to

Continued on page 23

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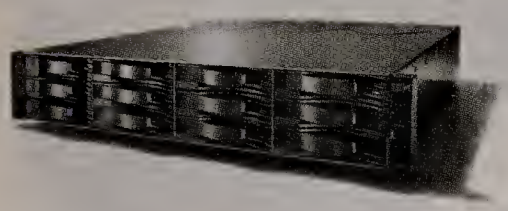

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Continued from page 20

enterprise IT teams. In fact, in an April 2008 Deloitte LLP study of 250 human resources leaders, 91% of the respondents said that they agreed that skills-based volunteering (which involves lending business knowledge and experience to nonprofits) would add value to training and development programs by fostering employees' leadership skills.

Clement Marcellus was willing to take a chance on that proposition. Marcellus is practice area leader at IBM Global Business Services. Earlier this year, he approved employee Scott Jenkins' request to spend two months in Bamako, Mali, working with fellow Geekcorps volunteers building radio stations and training local people to maintain them.

"We really encouraged Scott to volunteer overseas, but it's a two-way street. These volunteers are also bringing back a lot into IBM's own IT environment," says Marcellus. Nearly 70% of IBM's IT projects involve "a mix of talent, languages and culture," he adds — and they can only benefit from the experiences of a well-traveled technology pro.

OFF THE TRACK

Temporarily abandoning the rat race to work in a developing country may no longer be considered a blot on an IT professional's résumé, but not all employers support the concept.

"Sometimes people read [about overseas volunteer work] and think it's the coolest thing in the world. Other people have a closed-minded view and see volunteering as a less ambitious goal," says Jenkins, now an associate partner in the application innovation services practice within IBM Global Business Services.

Recruiters aren't completely sold on the idea either. According to Andy Steinem, CEO of executive search firm Dahl-Morrow International, volunteering may "show strength and the capacity to be flexible," but "potential employers want to know why you were on the fast track and all of a sudden took yourself off."

John Estes, vice president of strategic alliances at staffing firm Robert Half Technology, warns that although volunteering can enhance a CV, too much of it raises a red flag. "If I saw a résumé that was dotted with a lot of volunteer work, I'd question how money-motivated they are," he says. "Employers want people to jump in and earn bonus money."

Turning off potential employers isn't the only risk techies face when they choose to volunteer in developing countries. Temporarily moving from a well-oiled, state-of-the art IT environment to a makeshift tech shop in rural Kenya can result in culture shock. "In the U.S., we complain about network speeds and computers that don't work. But when you're working in a rural setting in Africa, you're happy if you have electric power," says Ollis.

And then there's the difficulty of reacclimating after spending months abroad. "It's very hard to travel to a developing country for any length of time and not be affected. Reverse culture shock is very common," says Muir.

But it's a danger that more and more techies are willing to face as personal enrichment — not just riches — takes center stage in some IT careers. ■

Waxer *is a freelance writer in Toronto. Contact her at cwaxer@sympatico.ca.*

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Here are five state-of-the-art trip-ups your predecessors never dreamed of. **By Mary K. Pratt**

CIO Pitfalls 2.0

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WHEN MIKE JONES started moving his data center into a virtual environment 18 months ago, he anticipated a big drop in the number of new servers he would need. And Jones, who is corporate vice president and CIO at Children's Hospital of Wisconsin, got that prediction right. Virtualization saved his department from buying 30 to 35 new servers.

What he didn't foresee was the reaction he got from his application vendors. They refused to support their products in his new virtual environment.

Like other CIOs, Jones has found himself caught short by the vagaries, entanglements and unforeseen consequences of new technology. These are not your predecessors' pitfalls. Today, when technology is likely to come from outside IT as well as from inside, the trip-ups are more difficult to anticipate than ever.

Here are a few of the newest hazards, along with first takes on how your peers are dealing with them.

1 NO SUPPORT

The vendors' reluctance took Jones by surprise. "One of the things we didn't understand when we got into virtualization is that they're not ready for it," he says. The vendors told him that because their software wasn't tested in the virtual setting, they wouldn't support it.

"If something goes wrong, it's not their fault. Isn't that a nice position to take?" Jones says. "So we're kind of taking a risk."

He decided to move ahead with virtualization anyway,

"One of the things we didn't understand when we got into virtualization is that [vendors are] not ready for it.

MIKE JONES, CIO, CHILDREN'S HOSPITAL OF WISCONSIN

figuring his department "had a better than 50/50 chance of things going right."

If an application has a problem, he can move it back to the original environment and start troubleshooting from there. (So far, Jones says, "everything has run fine.")

Still, this vendor issue has put a kink in the hospital's virtualization plans, Jones says, explaining that some critical applications, particularly those used in clinical care, will not be moved into a virtual environment until he knows the vendors will fully support it.

2 NO METRICS

As vice president of IT at the Georgia Aquarium, Beach Clark delivers solid reports on business results to the other executives at the Atlanta-based organization.

To that end, he uses business intelligence technology to track data for the accounting and finance department and to monitor ticket sales generated by the aquarium's Web site and e-mail campaigns.

But Clark is stumped about how to measure the success of the aquarium's use of social networking sites in generating interest and ticket sales. "That was kind of the pitfall," he says. "We got to where we are now, and we don't know how to measure it."

Clark says that his IT staff teamed up with the aquarium's marketing department early last summer to figure out the best ways to use social networking sites such as YouTube. But as the aquarium looks to allocate future money and staff time, he needs to know how effective that work has been.

"We're out there," Clark says. "We have our account on YouTube and an account on Facebook and MySpace, but we're having a hard time measuring the advertising impact. We don't have a good way to measure it against traditional advertising."

Nor, it seems, does anybody else. "I've talked with other CIOs and marketing people, and they're frustrated by it right now too," he says.

Clark's team is chipping away at the problem. He says the aquarium can use traditional tools, such as surveys, to gauge the impact of social networking. It can also look at the number of views on certain Web sites. And the social media sites themselves are starting to produce statistics to give organizations such as his a glimpse into their effectiveness.

"Then we can see what kind of impact that stuff is having on us and on our revenue, and we can calculate ROI," he says.

"We got to where we are now, and we don't know how to measure it.

BEACH CLARK, VICE PRESIDENT OF IT, GEORGIA AQUARIUM

3 NO ROOM

Robert Rosen knew that his organization's storage needs were growing at a fast clip. In fact, the CIO at the National Institute of Arthritis and Musculoskeletal and Skin Diseases says he expected 30% to 50% annual growth in storage demand. But it has been closer to 100%.

"I planned on it to grow exponentially, but it's growing even faster than expected," he says, noting that one of the organization's research groups recently received a new machine

Watch Your Step!

These five tips will help you avoid the new pitfalls – or recover if you trip up:

1. Network – particularly with those on the bleeding edge. You'll learn about the latest technologies – as well as the potential problems – before you implement them at your own organization.

2. Allocate some resources to test new ideas. It's going to be hard to do this in today's troubled economy, but it's better to be on top of the latest trends and technologies and how they could affect your organization than to discover them too late.

3. Build good relationships with user departments. It will be easier to focus on solving a problem if you're not trying to win over allies in the middle of a crisis.

4. Stay in continuous contact with users – especially the super-savvy ones. You'll learn about the technologies they really want to have (or are sneaking in) on their desktops.

5. Build a system that alerts you to potential problems or grass-roots tech solutions. Keeping in touch with your lower-tier IT workers can help you gain insight into the latest and greatest on the market. An internal blog, or e-mail requests asking "What are you hearing out there that I should know?" can also garner important feedback.

SOURCES: SUSAN J. BETHANIS, FOUNDER AND CEO, MARIPOSA LEADERSHIP INC.; BEACH CLARK, VICE PRESIDENT OF IT, GEORGIA AQUARIUM; ANITA LETO, DIRECTOR OF IT TRANSFORMATION, OUELLETTE & ASSOCIATES CONSULTING INC.

"You have to figure out what to do with all this data.

ROBERT ROSEN, CIO, NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

for genotyping that, in its first month, generated 15TB worth of data.

The staggering growth in storage needs is an unforeseen planning challenge. "You have to figure out what to do with all this data," he says. "And even five-year-old research, even older data, they still need available because they never know when it will be useful."

And then there's the cost. Rosen says he's now looking at where he can trim an already tight budget to pay for additional storage. On top of that, he has to find additional physical space to accommodate the hardware.

4 NO WARNING

When Kathleen King stepped into the role of CIO at Alabama Power in Birmingham a few months ago, she didn't anticipate having to help employees with social networking. But that's what they wanted, she says. And they had good reasons.

People wanted to use Facebook and MySpace at work to collaborate on business projects from various offices throughout several states. And since IT hadn't taken the lead, employees were trying to figure out how to use those applications on their own.

"It was a bit of a surprise to me how anxious people were to use it," says King, who oversees IT for Alabama Power and also works on some functional capabilities for its parent company, Atlanta-based Southern Co.

"I didn't realize how much the employee population would run in their own direction with this if we, as an IT organization, didn't move quickly to fulfill their needs."

Although she hadn't anticipated the issue when she first took the job, King moved quickly to address it. Rather than starting from scratch to customize MySpace or Facebook to meet the company's needs, she got a head start by taking a different path. She signed up about 100 workers for a pilot program to use a social networking application called My Site, part of the Microsoft Office SharePoint Server. Designed specifically for business collaboration, it was already in use at the parent company.

"I didn't realize how much the employee population would run in their own direction with this if we, as an IT organization, didn't move quickly to fulfill their needs.

KATHLEEN KING, CIO, ALABAMA POWER

There is still a lot of work to do, but IT has taken the first step of engaging and directing employees rather than trying to catch up with them. "What we really want is people who are interested enough, savvy and want to take the time to help us get My Site to the level we want it to be," King says.

5 NO MONEY

Like many CIOs, Rosen questioned some of the general economic practices that precipitated this fall's financial meltdown, but he was still surprised by the speed and extent of the fiscal collapse.

You don't need to be a CIO to have been caught short by that pitfall.

This past summer, as companies were firming up their 2009 budgets, CIOs generally expected modest budget increases — averaging 2.9%, says Shvetank Shah, executive director of the IT practice at the Corporate Executive Board, a research organization in Washington.

Few anticipated that just a few months later they'd have to rethink everything. Shah says his organization has found that nearly 80% of CIOs are re-evaluating their 2009 budgets, with 50% expecting cuts of 10% or more.

"No one expected the hammer to fall as quickly and as far as it did. Now IT has all of these projects in flight — half-built skyscrapers. What do you do?" Shah says. "They've got to make some hard choices about the projects they're going to fund and which they're going to let go."

Rosen, like others, is scrambling to cope with the effects of the flailing economy on his own $10 million-plus budget. He's working under the assumption that his upcoming budget will be funded at least at 2008 levels — Congress has yet to approve a budget for FY09, which started Oct. 1. But even that isn't guaranteed, so Rosen says he's postponing capital purchases and other expenses, even if they had been planned.

"Things that we thought we'd start doing, we're putting on hold to see how things turn out," he says. "But when that will happen, we're not sure."

CIOs now need to develop new standards for prioritizing, Shah says. They'll have to recalibrate what's considered essential and nonessential spending. They'll have to better articulate the need for endangered IT positions that they know are essential. And they'll have to swap multiyear planning cycles for quarterly budgeting, breaking up large deployments into smaller bites that can be built in months, not years.

"What we're discovering is that CIOs are often ill-equipped to reprioritize and to do incremental rollouts," says Andrew Horne, the London-based senior director in the IT practice at the Corporate Executive Board. "But they have no choice." ■

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Small Laptops Pose Big Threat

Ultraportables forgo size, weight, power — and security. By John Edwards

THEY'RE HIGHLY portable, inexpensive, very popular — and a potential security nightmare. Running against the trend of mobile computers featuring progressively larger processors, memory, storage, screens and price tags, ultraportable laptops promise to streamline and simplify their users' lives. Easy to carry, capable of running only a handful of modest applications and affordably priced, ultraportables have emerged over the past year or so to become one of the hottest mobile computing trends.

Ultraportable laptops were pioneered by Taiwanese PC maker Asustek with its Eee PC.

Pioneered by Taiwanese PC maker Asustek Computer Inc. with its Eee PC and now also available from vendors such as Dell, Hewlett-Packard and Fujitsu, ultraportables are designed to appeal to users who need portable systems with more power and functionality than a smart phone but don't want to lug a conventional laptop through offices, hotels and airports.

"It's a technology with great appeal to many people," observes Gabriel Vitus, IT director at the Certified General Accountants' Association of Canada, a trade organization in Vancouver, British Columbia.

That small package comes with built-in compromises, however. Ultraportables typically feature a processor that lags at least a generation or two behind the CPUs included in traditional laptops, a few gigabytes of solid-state memory and storage, a squeezed-down display and a cramped keyboard. But another characteristic of the new portable pipsqueaks is striking fear into the hearts of a growing number of IT managers: security weaknesses that are directly attributable to the machines' diminished technology.

"This is a threat that IT managers are just beginning to recognize," says Brian Wolfe, a security analyst at Lazarus Technologies Inc., an IT consulting service in Itasca, Ill.

REDUCED RESOURCES

Minimized hardware resources force ultraportables — and their users — to cope with weakened system software. Most models ship with a stripped-down Linux operating system or, in some cases, Microsoft Corp.'s previous-generation operating system, Windows XP. Newer and more capable operating systems, which also tend to have the latest internal security safeguards, demand processing and storage power that ultraportables typically lack, Wolfe notes.

Ultraportables' reduced resources also limit their ability to run add-on security software, such as data encryption and anti-malware tools. With processing power, internal memory and storage space all at a premium, it can be difficult — sometimes impossible — to squeeze security software onto an ultraportable. "As a result, the machines are often sent out into the world with little or no protection," Wolfe says.

Vendors' use of dated software can also make ultraportables more susceptible to various malware. Earlier this year, for example, Brazilian security firm Rise Security released an alert that showed that old, unpatched Samba

code found on the Eee PC allowed the machine to be subverted ("rooted") right out of the box. Such vulnerabilities allow hackers to remotely gain complete control over the systems.

Other key security features are often absent on ultraportables. "Many, if not most, [ultraportables] are sold without Trusted Platform Modules because they are targeted at the consumer market," says Rob Enderle, an analyst at Enderle Group in San Jose. "This means they either don't have encryption solutions or the solutions aren't that robust."

Enderle also notes that most ultraportables aren't designed to be managed centrally and therefore can't have their solid-state drives remotely wiped clean of data in the event of loss or theft.

ULTRA INVADERS

The number of ultraportables acquired by enterprises remains small, at least compared with conventional laptops, notes Wolfe. Still, many IT managers are discovering that some employees are starting to take their machines into the office and along on business trips. This trend is raising security concerns, he says.

Ultraportables' built-in Wi-Fi and USB connectivity makes moving data from enterprise systems onto the machines relatively simple, says Christopher Ciabarra, founder and president of Los Angeles-based security software firm Network Intercept LLC.

Ultraportables' wireless capabilities also make it easy for them to disgorge stored data to unauthorized parties. Ciabarra believes that Wi-Fi vulnerabilities are a potentially big problem. "Everywhere an ultraportable goes, it can be logging into networks and exposing its data," he says. "The user often isn't even aware this is happening."

To protect against this kind of exposure, he recommends that IT secure Wi-Fi networks and enforce password access to the devices.

Christine Leja, CIO at Southwestern Illinois College in Belleville, Ill., says her school's students are always experimenting with new gadgets, including ultraportables, forcing her to keep a step ahead of potential threats. "Every year brings something new, it seems," she says.

Students don't have access to enterprise data, so the biggest perils Leja faces are from Wi-Fi intruders and malware, which ultraportable users can inadvertently introduce into the university's system. "We protect against this by operating a secure, closed network that students and employees have to log into," she says.

The network is also compartmentalized into virtual LANs that serve various classroom, business and general-purpose applications, helping to limit any breaches. Furthermore, employees transmitting sensitive data are required to use cellular 3G networks, which Leja says are more secure than Wi-Fi connections. "We think that's a smart move when dealing with all types of mobile devices," she says.

Ultraportables' toylike appearance and size may cause some users, at least on a subliminal level, to let down their guard when it comes to security. "In some ways, the machines don't look like a 'real' computer, so it may lead to people being less protective of them," Ciabarra says.

Moreover, a smaller laptop may be easier to misplace than a full-scale laptop. "Look at the number of people who leave their cell phones in taxis and airport lounges," Vitus says. "An ultraportable isn't all that much larger."

The systems' compact size may also appeal to thieves, Enderle says. "This class of product is particularly easy to steal because it is very easy to conceal," he says. "It is also very desirable, which suggests it will be easy to sell as well."

BUILDING A STRATEGY

Although ultraportables pose a variety of unique security challenges, the risks can be contained and managed by extending and expanding existing laptop security practices. On the wireless front, conventional Wi-Fi security protocols and access controls should be adequate to deal with threats to enterprise data from ultraportables and other emerging wireless-enabled devices, Vitus says.

> **"The machines are often sent out into the world with little or no protection."**
>
> **BRIAN WOLFE,** SECURITY ANALYST, LAZARUS TECHNOLOGIES

"It doesn't matter what device they're using; they can't get into our network unless we want them to," he says.

When ultraportables are used off-premises as an extension of a company's technology, however, the challenge grows more serious. If storage encryption can't be used, an alternate data-protection technique should be adopted. Enderle says that critical data should never be stored inside an ultraportable. Instead, any data should be accessed from a secure remote repository to avoid the possibility of infecting enterprise systems.

Another option for protecting sensitive documents, Enderle says, is to use a secure flash drive, such as IronKey, that is itself protected and stays with the employee. That way, if the laptop is stolen, the sensitive data doesn't go with it — the data always remains on the secured flash drive.

But the best protection of all, Enderle notes, is prevention. "Most [enterprise] data should not be on a device in this class anyway," he says.

Employee education in acceptable-usage practices is a must, regardless of the IT security systems used, Enderle says.

Leja agrees. "You have to count on continual security awareness," she says. "Make sure that [students or employees are] being conscientious, and then use the few tools that do exist to help."

The worst approach any IT manager can take is to ignore the threat ultraportables pose. "Even if you haven't yet encountered any of these machines," Wolfe says, "you probably eventually will." ■

Edwards *is a freelance writer in Gilbert, Ariz. Contact him at jedwards@gojohnedwards.com.*

Massive Layoff Is A Security Issue

It's not easy knowing that **1,000 people** will lose their jobs. And it's no picnic making sure **that no IP is lost** in the process.

Trouble Ticket

ISSUE: A 15% reduction in the company's workforce means access to systems must be secured appropriately.

ACTION PLAN: Step up monitoring and shut down access as quickly as possible to make sure no intellectual property leaks out.

IT'S BEEN a rough week. Today, my company announced a 15% cut in its workforce, or about 1,000 employees.

Naturally, I knew this well before today. Layoffs are never easy, and it can be agonizing to come into contact with co-workers — some of them friends — and say nothing, despite knowing that they will lose their jobs in a few days. But as the security officer, I needed to be privy to the list ahead of time because I had to take steps to ensure continued security.

My first task was to identify any layoff candidates who respresented single points of failure, meaning they were the only employees who could perform a particular critical job function. Single points of failure, human or otherwise, are a bad idea. But it happens, and it's better to recognize them in advance than to realize your mistake after they've left the company.

I was also expected to identify employees who could pose a danger to themselves, others or company resources. This isn't really something that involves information security, but the "security" label in my title has drawn me into some areas related to physical security.

Finally, I had to secure our intellectual property. While some employees were asked to stay for one to three months, many were told to leave immediately. Those employees' accounts had to be terminated as quickly as possible.

For example, many of them were service technicians, and we couldn't risk letting any of them retain access to the network and our highly valuable service documentation.

Ahead of the notification, I briefed my security engineers about the pending action and had them pay more attention than usual to our intrusion-detection sensors. Currently, our sensors are positioned to watch traffic running from the Internet to our DMZ and the data center. I wanted to watch for denial-of-service attacks and attempts to gain unauthorized access to our critical systems. I also had some extra rules put in place for our data-leak prevention infrastructure to watch for all PDF files, source code and CAD documents leaving the company, since these three file types represent a large portion of our valuable intellectual property.

We've done this sort of thing before, but never on this scale.

SCALING UP

We've done this sort of thing before, but never on this scale, and it was a challenge to terminate hundreds of accounts in a very short period of time while minimizing the number of people who would know about the layoffs in advance.

Since we don't have a robust identity management tool, several interfaces must be used to remove access. The most important deactivation is the domain account, since many of our critical business systems are configured with single sign-on. Other systems, such as our SecureID servers, BlackBerry Enterprise Servers and remote access, couldn't be tackled ahead of time.

And because we were laying off some network engineers, we had to remove access to resources such as routers, switches and telephony systems that are managed independently of the single sign-on environment, and we had to change all administrative passwords. Some of this was handled in advance by using scripts that kicked in after the notification was announced, but scripts don't always work as anticipated.

Notification day is drawing to a close, and so far we have seen a few sensitive documents being sent to Yahoo addresses — events that I have started to investigate. Otherwise, everything has been quiet, with all the scripts and account terminations working well.

My next task is to figure out how to do more with less, which I'll discuss in my next column. ■

This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

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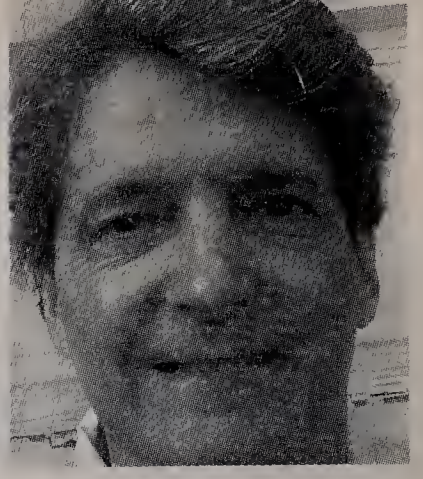
OPINION

Preston Gralla

Windows 7: The Linux Killer



MICROSOFT has long been worried about Linux competition in the server market. When it came to ordinary PCs and laptops, however, it knew it had little to fear.

But that was then. Now Microsoft may fear Linux on the desktop as much as it does the Mac. It's finally taking Linux seriously as a desktop operating system, and it has designed Windows 7 to kill it.

Let me explain.

The threat to Windows comes entirely from "netbooks" — lightweight, inexpensive laptops that typically use Intel's low-powered Atom processor and don't come with substantial amounts of RAM or powerful graphics processors. They're designed mainly for browsing the Web, handling e-mail, writing memos, and taking care of simple word-processing or spreadsheet chores.

Netbooks will account for about a third of all PC growth this year, according to Citigroup. Shipments will rise at an annual average rate of 60% to reach 29 million netbooks in 2010, compared with 18% growth for standard notebooks, says a September BNP Paribas report.

Clearly, the future is in netbooks. And that has Microsoft worried. Netbooks can't handle Vista's hardware demands, so XP is the only Microsoft operating system that runs on them. But Linux is ideally suited for lower-powered netbooks.

The result? Acer and Asustek, which account for 90% of the netbook market, are using Linux on about 30% of their low-cost notebooks, according to Bloomberg. Making matters worse, if Linux is used on those netbooks, it means that Microsoft Office isn't. So Microsoft takes a double hit every time someone buys a Linux netbook.

Microsoft isn't just worried about ceding 30% of the netbook market to Linux. It's also worried that if people get used to running Linux on netbooks, they'll consider buying Linux on desktop PCs as well. Here's what Dickie Chang, an analyst at IDC in Taipei, told Bloomberg: "It's a real threat to Microsoft. It gives users a chance to see and try something new, showing them there is an alternative."

Microsoft may fear Linux on the desktop as much as it does the Mac.

Microsoft, though, has a not-so-secret weapon against Linux: Windows 7. Its new operating system, slated to be introduced sometime next year, is designed to work fine on netbooks. In fact, at Microsoft's recent Professional Developers Conference, where the pre-beta of Windows 7 was unveiled, Windows Senior Vice President Steve Sinofsky showed off Windows 7 on his Lenovo S10 and said it used less than half of the netbook's 1GB of RAM.

When Windows 7 ships, expect a massive marketing blitz pushing it on netbooks with special deals, and netbook hardware taking advantage of Windows 7 capabilities, including touch screens.

In fact, the blitz has already begun. Asus CEO Jerry Shen announced that he plans to release versions of the Eee PC powered by Windows 7 in mid-2009, including a touch-screen version.

This is anything but a level playing field. Because no company owns Linux, there won't be a competing marketing push for Linux netbooks. Microsoft has shown before how tough it can be on competitors — remember Lotus 1-2-3, WordPerfect and Harvard Graphics? So expect Linux netbook sales to fall when Windows 7 ships.

Despite Microsoft's killer instincts, I don't think Linux netbook sales will stop dead. There will always be a niche for them. But within a year of the Windows 7 launch, Linux market share will drop. The high point for Linux netbook sales will be from now until the launch of Windows 7. After that will come the inevitable decline. ■

Preston Gralla *is a contributing editor for* Computerworld.com *and the author of more than 35 books, including* How the Internet Works *(Que, 2006).*

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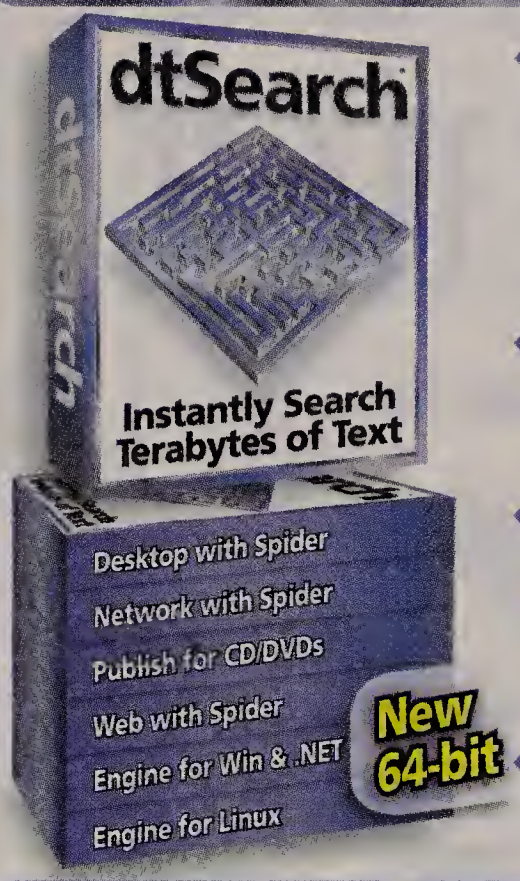

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Career Watch

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Where Are the Jobs?

MAYBE IN TEXAS AND THE CAROLINAS

Bizjournals' rating of 100 U.S. job markets placed four Texas cities (and two others in the Southwest) and four in North and South Carolina among the top 12. The worst market by far was Detroit, which has lost more than 30,000 jobs over the past year and 125,000 over the past five years. The rating system weighted measures in nine categories, including unemployment rates and job growth over various time periods. IT jobs were not singled out, however. Here are the top 12 markets:

Rank	City	Jobs Added in Past Year	Jobs Added in Past 5 Years
1	Houston	48,100	315,200
2	Austin	11,600	109,700
3	Dallas-Fort Worth	47,500	312,800
4	Raleigh, N.C.	10,900	78,900
5	Seattle	20,500	193,800
6	San Antonio	13,200	89,400
7	Charlotte, N.C.	14,200	96,100
8	Oklahoma City	12,300	47,600
9	Durham, N.C.	5,700	30,100
10	Salt Lake City	-2,500	78,800
11	Charleston, S.C.	800	32,700
12	Greenville, S.C.	4,500	25,200

SOURCE: *BIZJOURNALS*, SEPTEMBER 2008

PAGE COMPILED BY JAMIE ECKLE.

■ ASK THE RECRUITERS

Getting to the Top

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How can IT executives get on the A-list for a high-profile job opening? Is it bad form to reach out to an executive search firm?

Those are just a couple of the questions posed to three executive recruiters during a Q&A session at the 2008 CIO Executive Leadership Summit in Stamford, Conn. The recruiters who fielded the questions were Rhona Kannon, a partner in the IT practice at The Cambridge Group Ltd.; Beverly Lieberman, president of Halbrecht Lieberman Associates Inc.; and Phil Schneidermeyer, a partner at Heidrick & Struggles International Inc.

So, is it a mistake to cold-call a search firm? Absolutely not, Lieberman said. But such calls are tough for recruiters to respond to, she noted. Instead, she recommended that IT executives contact recruiters through a source that both parties know and trust. Another way to get on a recruiter's radar screen is to refer a friend or colleague, said Schneidermeyer.

Having a pre-existing relationship with a recruiter can be helpful, Lieberman said, but you shouldn't think such relationships give you license to be informal. Never dress casually for an interview, even with a recruiter you know, she advised. Also, don't use slang or talk freely about personal issues.

As for getting on the A-list, Lieberman said applicants need some critical qualities, such as affability and strong communication skills. She added that recruiters and employers look to see how job candidates present themselves through their résumés. And job candidates who lack a bachelor's degree face an uphill battle. "If you're applying for a senior role, you'd better be enrolled" in a bachelor's degree program, she said.

Another factor is the candidate's current or previous employers. "We get to know companies that are known for developing strong talent," said Schneidermeyer.

One thing he warned against is overemphasizing the number of industry awards you've received. "I had one recent job candidate who filled the back side of his résumé with awards, and it got me to wondering when the hell he found the time to do his job," he said.

Another warning about your résumé: If it's more than three pages long, "forget about it," said Lieberman. "Most CEOs want to see two pages." Still, it's important to cite individual projects, financial savings and other achievements, with short paragraphs describing each one, said Schneidermeyer.

It's critical for job seekers to cite their objectives on their résumés, said Kannon. "No one wants to read through a résumé and try to figure out who you are," she said. She advised IT leaders to think about résumés they have read from IT job applicants that have appealed to them.

The road to the CIO's office used to nearly always start in application development, Lieberman said, but an increasing number of organizations are bringing in executives from outside of IT to serve as CIO. For instance, Harriet Edelman, CIO at Avon Products Inc., previously ran the company's global supply chain.

A third path is working for a major consulting firm such as McKinsey & Co., PricewaterhouseCoopers or Accenture, said Lieberman. Those types of consultants, she noted, "are highly regarded by CEOs."

– THOMAS HOFFMAN

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Shark Tank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Sort of Makes You Appreciate Users

It's the 1980s, and this pilot fish is the admin for his company's large minicomputer. So when all the terminals suddenly stop responding, it's fish's problem. "I walked down the hall to the machine room to see what had happened," says fish. "My eyes bugged out when I saw that a group of carpenters had somehow gotten past the locked door and had slid the two washing-machine-size disk drives apart and were using them for sawhorses while cutting wood! I walked in and yelled, 'Get the @#$%! out of my machine room!' The lead carpenter said, 'Make me, and then I can laugh as you're fired.' I went to my boss who went to his boss, and it escalated up the chain of command until it was decided that they should leave. By then, they were done with their project – putting in a plywood backboard for some telephone equipment – and gone. It cost us a fortune to have both drives repaired, and I had to rebuild the OS, then restore all the data from backups, ruining my weekend."

Aha!

Vendor tech can't figure out why a hard drive on this minicomputer fails every Friday, according to a pilot fish on the inside. "In those days, the drives were huge, removable 300MB units, about three feet high," fish says. "The tech finally asked the computer operator to explain everything that went on in the computer room every Friday. She said she would do the computer backups, put everything away, water the flower in the computer room and go home. The tech noticed the hanging flowerpot was well high and away from the hard drive, so he didn't think that was the problem – until he watched the computer operator get a water pot, put a chair next to the hard drive, stand on the removable lid of the hard drive and water the flower. Needless to say, the hard drive crashed as soon as she stood on it. Case solved."

How to Speak Sales

Customer-facing employee buttonholes this pilot fish. User: "Just a quick question about the claim-sorting feature." Fish: You need to ask Fred; that's his project. User: "No, I want to know when you'll have it in the client interface, because I just told the client about it, and they're really excited and want to see it." Fish: Um, there *is* no claim-sorting feature in the client interface. Fred just started the project, and we don't even have a full list of features yet, much less know what we'll be able to put in the client interface when we do have it. You have to talk to Fred. User: "OK, so you mean you don't know when it will be ready?" Fish: That is correct. User: "Thank you."

■ *Sharky's ready for your true tale of IT life. Send it to me at sharky@computerworld.com. I'll send you a sharp Shark shirt if I use it.*

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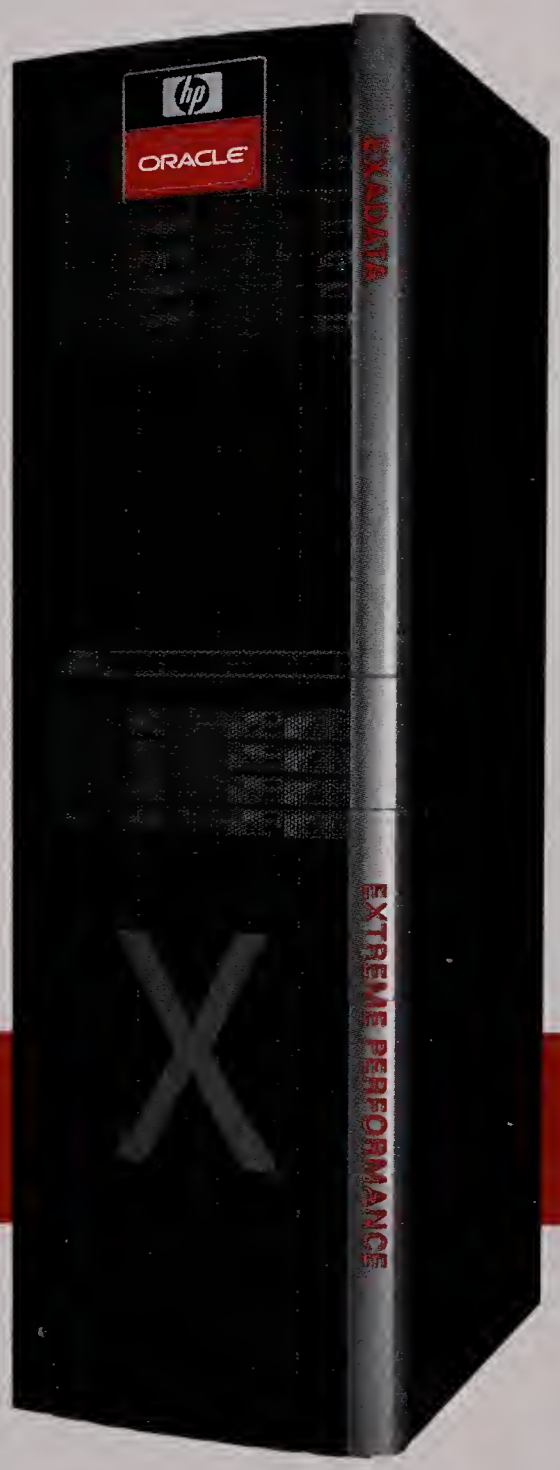

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